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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/020,891	12/19/2001	Gee Sung Chae	8733.495.00	8845
30827	7590	11/03/2004	EXAMINER	
MCKENNA LONG & ALDRIDGE LLP 1900 K STREET, NW WASHINGTON, DC 20006			DUONG, THOI V	
			ART UNIT	PAPER NUMBER
			2871	

DATE MAILED: 11/03/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/020,891

Applicant(s)

CHAE, GEE SUNG

Examiner

Thoi V Duong

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 03 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 18 August 2004.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 18-41 ~~is/are~~ pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 18-41 ~~is/are~~ rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing-sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

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DETAILED ACTION

1. This office action is in response to the Amendment filed August 18, 2004.

Accordingly, claim 28 was amended, and claims 1-17 were cancelled. Currently, claims 18-41 are pending in this application.

Response to Arguments

2. Applicant's arguments with respect to claims 18 and 28 have been considered but are moot in view of the new ground(s) of rejection.

Claim Objections

3. Claims 29-41 are objected to because of the following informalities: "the method for manufacturing the in-plane switching mode LCD device" should be recited in the claims instead of "the in-plane switching mode LCD device" since these claims are dependent on claim 28 which is a method claim.

Appropriate correction is required.

Claim Rejections - 35 USC § 103

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

5. Claims 18-41 are rejected under 35 U.S.C. 103(a) as being obvious over Oh et al. (USPN 6,281,957 B1) in view of Hibino et al. (USPN 6,529,251 B2).

The applied reference, USPN 6,281,957 B1 of Oh et al., has a common assignee with the instant application. Based upon the earlier effective U.S. filing date of the

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reference, it constitutes prior art only under 35 U.S.C. 102(e). This rejection under 35 U.S.C. 103(a) might be overcome by: (1) a showing under 37 CFR 1.132 that any invention disclosed but not claimed in the reference was derived from the inventor of this application and is thus not an invention "by another"; (2) a showing of a date of invention for the claimed subject matter of the application which corresponds to subject matter disclosed but not claimed in the reference, prior to the effective U.S. filing date of the reference under 37 CFR 1.131; or (3) an oath or declaration under 37 CFR 1.130 stating that the application and reference are currently owned by the same party and that the inventor named in the application is the prior inventor under 35 U.S.C. 104, together with a terminal disclaimer in accordance with 37 CFR 1.321(c). For applications filed on or after November 29, 1999, this rejection might also be overcome by showing that the subject matter of the reference and the claimed invention were, at the time the invention was made, owned by the same person or subject to an obligation of assignment to the same person. See MPEP § 706.02(l)(1) and § 706.02(l)(2).

Re claims 18 and 28, as shown in Figs. 2A and 2B, Oh et al. discloses a liquid crystal display (LCD) as well as a method of fabricating the same comprising:

- a gate electrode 105 formed on a substrate 110;

- a gate insulating film 112 formed on an entire surface of the substrate;

- a semiconductor layer 115 and an ohmic contact layer 116 formed on the gate insulating film 112;

- a pixel electrode 108 (data electrode), source/drain electrode 106 formed above the ohmic contact layer 116,

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wherein, re claim 33, the drain electrode is electrically connected to the pixel electrode 108 (Fig. 2B and col. 4, lines 65-67);

a passivation layer 120 formed on the pixel electrode 108; and

a common electrode 109 formed on the passivation layer 120.

Re claims 19, 20 and 29, Oh et al. discloses that the gate electrode 105 includes aluminum (Al) (col. 4, lines 53-56), which is a low resistance material.

Re claims 23, 24 and 31, Oh et al. discloses that the source and drain electrodes 106 include aluminum (Al) (col. 5, lines 59-62), which is a low resistance material.

Re claims 25, 26 and 32, Oh et al. discloses that the pixel electrode includes indium tin oxide, which is a transparent conductive material (col. 6, lines 20-21 and 45-47).

Re claims 27 and 34, the common electrode 109 includes indium tin oxide (col. 5, lines 11-15).

Re claims 35 and 36, Oh et al. discloses that the gate electrode 105 is deposited by a sputtering process and patterned using photolithography (col. 4, lines 53-56).

Re claims 39 and 40, Oh et al. discloses that the pixel electrode is patterned by a sputtering process (col. 4, line 65 through col. 5, line 2).

Oh et al. discloses all aspects of claims 18 and 28 as shown above except for forming a buffer layer on the ohmic contact layer.

As shown in Figs. 4(a) to 4(d), Hibino et al. discloses a method of making a thin film transistor structure comprising forming a buffer layer 20 (TiN film) on an ohmic contact layer 18 and a source electrode 21 (Al film) on the buffer layer 20,

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wherein, re claims 21, 22 and 30, the buffer layer 34 includes a metal titanium (col. 6, lines 9-12); and

wherein, re claims 37 and 38, Hibino et al. discloses that the semiconductor layer 17, the ohmic contact layer 18, and the buffer layer 20 are patterned on the gate insulating film 16 by a plasma chemical vapor deposition process (col. 7, lines 11-33); and


wherein, re claim 41, the passivation layer 24 (organic insulator film) is formed by a deposition process (col. 7, lines 63-67).

Thus, it would have been obvious to one having ordinary skill in the art at the time the invention was made to modify the method of Oh et al. with the teaching of Hibino et al. by forming a buffer layer on the ohmic contact layer so as to protect the Al film of the source or gate electrode from erosion caused by etching (col. 3, lines 14-18 and col. 7, lines 34-59).

Conclusion

6. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Thoi V. Duong whose telephone number is (571) 272-2292. The examiner can normally be reached on Monday-Friday from 8:30 am to 4:30 pm. If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Robert Kim, can be reached at (571) 272-2293.

Thoi Duong
10/30/2004



TARIFUR R. CHOWDHURY
PC EXAMINER